

the running ice, and allowed the formation of a sheet of surface ice.

ICE.

At the end of the month the Mississippi River remained frozen as far south as Prairie du Chien, Wis. The ice moved out below the drawbridge at Dubuque, Iowa, during the afternoon of February 17, and above the bridge on February 26, the earliest opening of the Mississippi River at Dubuque in 29 years. The previous earliest date was March 3, 1892. At Davenport, Iowa, the ice moved out on February 15, and at Keokuk, Iowa, on February 1.

The Missouri River remained closed from Omaha northward, and the rivers of New England and New York also remained frozen.

MOUNTAIN SNOWFALL.

As a whole, conditions improved materially during the month, only a limited number of localities reporting a probable deficiency in water supply during the coming spring and summer. Estimates are of course based upon the assumption that the spring temperatures will not be unusually high.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Anonymous publications are indicated by a —.

Angenheister, G.

Wolkenbeobachtungen in Samoa. [Göttingen.] [1909.] 8 p. 8°.
(Separatabdruck: Nachr. k. Gesell. Wiss., Göttingen, Math.-Physik. Kl., 1909.)

Austria. K. k. Zentralanstalt für Meteorologie und Geodynamik.

Allgemeiner Bericht und Chronik der im Jahre 1908 in Oesterreich beobachteten Erdbeben. Wien. 1910. vi, 281 p. 8°.

Bavaria. K. Bayerischen meteorologische Central-Station.

Deutsches meteorologisches Jahrbuch: Bayern, 1909. München. 1910. v. p. f°.

Brillmann, Reinhard.

Untersuchungen über das diffuse Wandlicht. Emden. 1910. 39 p. 8°. (Diss.—Kiel.)

Capodimonte. Reale osservatorio.

Osservazioni meteoriche, 1907, 1908, 1909. n. p. n. d. 8°.
Riassunto delle osservazioni meteoriche . . . 1907, 1908. n. p. n. d. 8°.

Fassig, Oliver L[anard].

Average annual rainfall of Porto Rico [and other papers]. Washington, etc. 1909, 1910. v. p. 4°.

Fourier, [Jean Baptiste Joseph].

Mémoire sur les températures du globe terrestre et des espaces planétaires. [Paris.] [1824.] p. 569-604. 4°.

Germany. K. Marine-Amt. Observatorium in Wilhelmshaven.

Veröffentlichungen . . . Neue Folge, Heft 1, 2. Übersicht über . . . Erdmagnetismus, 1910. Berlin. 1911. 6 p. f°.

Golitsyn, B.

Über einen neuen Seismographen für die Vertikalkomponente der Bodenbewegung. St. Petersburg. 1910. 34 p. 4°.

Greece. Observatoire national d'Athènes.

Annales . . . Tome 5. Athènes. 1910. 592 p. f°.

Hedges, Killingworth.

Modern lightning conductors; . . . Report of the Lightning research committee of 1905, also the Phoenix fire office 1910 rules, with notes as to the methods of protection and specifications . . . 2d ed. London. 1910. v. p. 8°.

Lenard, P.

Ueber die Strahlen der Nordlichter. Heidelberg. 1910. 9 p. 8°.

Lenard, P., & Ramsauer, C.

Ueber die Wirkungen sehr kurzweligen ultravioletten Lichtes auf Gase und über eine sehr reiche Quelle dieses Lichtes. Heidelberg. 1910. v. p. 8°.

Lisbon. Observatorio do Infante D. Luiz.

Annaes . . . 1907, v. 45. Lisboa. 1910. 131 p. f°.

Mémery, Henri.

Météorologie et phénomènes solaires. Bordeaux. 1910. 63 p. 8°. (Soc. d'océanographie du Golfe de Gascogne.)

Russia. Ministry of Agriculture. Meteorological bureau.

Annalen der Landwirtschaftlichen Meteorologie. [T. p. Russian and German. Text in Russian.] Bd. 1, Lfg. 1—Wintergetreide. (Roggen und Weizen.) St. Petersburg. 1910. x, 33 p. f°.

Solvay, Ernest.

De la condensation électrique dans l'atmosphère. Bruxelles. 1907. 19 p. 8°. (Repr.: Ciel et terre, 1907. T. 28.)

Strub, Walter.

Temperaturverhältnisse von Basel. Basel. 1910. 139 p. 8°. (Diss.—Basel.)

Wiesbaden. Meteorologische Station.

Beobachtungen, 1909. Wiesbaden. 1910. 54 p. 8°. (S.-Abdr.: Nassauer Verein für Naturkunde.)

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology and other cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —.

Journal of geology. Chicago. v. 19. January—February, 1911.

Coleman, A. P. Climate and the physical conditions of the Keewatin. p. 1-14.

Meteorological society of Japan. Journal. Tokio. 30th year. January, 1911.

Fujiwara, S. On kites and kite lines. (2d report. English.) p. 1-7.

Nature. London. v. 85. February 2, 1911.

— Colliery warnings. p. 437-438. [Signed "The author of the warnings." Reply by H. Louis.]

Royal society of Edinburgh. Proceedings. Edinburgh. v. 31. 1911.

Wedderburn, E. M., & Williams, A. M. The temperature seiche p. 257-258. [Abstract from Transactions.]

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Buchan, Alexander, & Omund, Robert Trail. The Ben Nevis observations. 1898-1904 and appendix. p. 1-714.

Royal society of London. Proceedings. London. Ser. A. v. 85. No. A 575.

Schuster, Arthur. The origin of magnetic storms. p. 44-50.

School science and mathematics. Chicago. v. 9. March, 1911.

Brown, Robert M. The humidity of the air in school rooms. p. 252-256.

Science. New York. v. 33. March 3, 1911.

Gulick, Luther H. The air we breathe in buildings. p. 326-328.

Scientific American. New York. v. 104. March 4, 1911.

— The southernmost meteorological station of the world p. 219.

— Fog and fog signals. p. 227. [Abstract of paper by A. G. McAdie.]

Scientific American supplement. v. 71. March 25, 1911.

— The world's daily weather maps. Systems used in various countries. p. 188.